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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/991,065	11/16/2001	Dennis P. Connors	69950/7262	3851

7590 08/03/2005

Eddie Liao
M2 NETWORKS, INC.
2345 Adair Street
San Marino, CA 91108

EXAMINER	
ABELSON, RONALD B	

ART UNIT	PAPER NUMBER
2666	

DATE MAILED: 08/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/991,065	CONNORS ET AL.	
	Examiner	Art Unit	
	Ronald Abelson	2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 November 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 November 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *6/6/2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Line 4 of the abstract contains the word "means".

Appropriate correction is required.

Drawings

2. Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing

figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-3 and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Zhang (US 6,879,561).

Note, in this office action, the examiner corresponds the applicant's plurality of packet flows with the Zhang's plurality of QoS levels. The examiner further maintains that different applications in Zhang support different QoS levels since Zhang teaches different QoS levels (col. 3 lines 60-65).

Regarding claims 1 and 16, Zhang teaches a method of automatic repeat request 'ARQ' for a plurality of packets (col. 2 lines 8-11) to be transmitted to a receiver (fig. 1 box 102).

Zhang teaches performing ARQ (per packet ARQ, col. 2 lines 8-11) for packets belonging to respective ones of a plurality of packet flows (per packet QoS, col. 2 lines 8-11) independent from and without affective transmission of packets of others of the plurality of packet flows (scheduler can support per packet QoS, can support per packet ARQ, col. 2 lines 8-11), wherein each of the plurality of packet flows corresponds to a specified type of service (multiple applications can be supported for each user, col. 3 lines 60-62).

Regarding claim 2, parsing each of the plurality of packets to be transmitted to the receiver into a respective one of the plurality of packet flows (Zhang: queues determined according to per packet QoS, col. 4 lines 28-32).

Regarding claim 3, storing each of the plurality of packets in a location in memory based upon packet flow (Zhang: queues determined according to per packet QoS, col. 4 lines 28-32).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang in view of Staples (US 20020118671).

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Regarding claim 12, Zhang teaches a method of automatic repeat request 'ARQ' for a plurality of packets (col. 2 lines 8-11) to be transmitted to a receiver (fig. 1 box 102).

Zhang teaches performing ARQ on a first set of one or more packets (per packet ARQ, col. 2 lines 8-11), wherein the first set of one or more packets belong to a respective one of a plurality of packet flows (multiple applications can be supported by each user, col. 3 lines 60-63).

Zhang teaches performing ARQ on a second set of one or more packets (per packet ARQ, col. 2 lines 8-11), wherein the second set of one or more packets belong to another respective one of a plurality of packet flows (multiple applications can be supported by each user, col. 3 lines 60-63).

Zhang teaches the ARQ performed on the first set of one or more packets is independent from and does not affect the transmission of the second set of packets (per packet ARQ, col. 2 lines 8-11).

Although Zhang teaches a plurality of packet flows / multiple applications can be supported by each user, the reference is silent the first and second portions of the transmission frame transmit different packet flows.

Staples teaches, within an IP environment, the first and second portions of the transmission frame transmit different packet flows (fig. 12A box 1126, 1128, 1130, MUX, 1132, pg. 16 [0197]). Note, Zhang is also in an IP environment (Zhang: col. 3 lines 53-60).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of Zhang to transmit, within a single frame, each of the plurality of plurality of packet flows wherein each packet flow is located in a separate portion. This modification can be performed according to the teachings of Staples, as shown. As previously shown, the suggestion for transmitting within a single frame, each of the plurality of plurality of packet flows wherein each packet flow is located in a separate portion is to enable each user to transmit multiple applications (Zhang: col. 3 lines 60-63). The benefit obtained by this process is to minimize delay for transmission for each application since each frame would always be able to transmit data from all the applications.

Regarding claim 13, wherein the ARQ performed on the second set of one or more packets is independent from and does not affect the transmission of the packets in the first portion of the transmit frame (Zhang: scheduler can support per packet ARQ, col. 2 lines 8-11).

Regarding claim 14, the plurality of packet flows contains packets having one of a plurality of types of service (Zhang: QoS, col. 3 lines 64-65).

8. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Zhang and Staples as applied to claim 12 above, and further in view of Malmgren.

Regarding claims 15, although the combination teaches ARQ and transmitting a plurality of packet flows (Zhang: col. 3 lines 60-62), the combination is silent on performing selective-repeat-automatic repeat request.

Malmgren teaches performing selective-repeat-automatic repeat (col. 1 lines 47-50).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of Zhang by implementing the Selective Repeat ARQ algorithm as shown by Malmgren. This

modification can be performed in software. The suggestion to modify is the sender may retransmit the packet based on feedback provided by the receiver (Malmgren: col. 1 lines 30-31). This would benefit the system by permitting the sender to retransmit packets that were not correctly received by the receiver.

9. Claims 5, 7, and 17 rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang as applied to claim 1 and 16 respectively above, and further in view of Corlett (US 20030023710).

Regarding claims 5 and 17, although Zhang teaches ARQ, the reference is silent on assigning a time-to-live value to each packet to be transmitted to the receiver, the time-to-live value representing a maximum number of transmit attempts of the packet over the channel including re-transmit attempts using the ARQ.

Corlett teaches assigning a time-to-live value to the each packet to be transmitted to the receiver, the time-to-live value representing a maximum number of transmit attempts of the packet over the channel including re-transmit attempts using the ARQ (retransmitted, TTL value of 0 drops the packet, pg. 16, [0235]). Note, the examiner corresponds the applicant's ARQ with the retransmission process of the reference.

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of Zhang by having a TTL parameter within the packet of Zhang. This modification can be performed in software by adding a TTL value parameter to the packets. The suggestion to modify the packet format of Zhang by including a TTL value is to implement a packet delay bound (Zhang: col. 3 lines 65-67). This would benefit the system by dropping packets that are no longer useful to its intended destination (Corlett: TTL value of 0 drops the packet, pg. 16, [0235]).

Regarding claim 7, decrementing the time-to-live value after each transmit attempt (Corlett: [0235]).

10. Claims 4, 10, and 18 rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang as applied to claims 1 and 16 above, and further in view of Staples. Note, claims 4 and 10 and dependent upon claim 1 and claim 18 is dependent upon claim 16.

Regarding claims 10 and 18, in addition to the limitations previously discussed, Zhang teaches performing ARQ for packets belonging to the respective ones of the plurality of packet flows (per packet ARQ, col. 2 lines 8-11, multiple applications

can be supported by each user, col. 3 lines 60-63) independent from and without affecting the transmission of the packets of the others of the plurality of packet flows transmitted (per packet ARQ, col. 2 lines 8-11, multiple applications can be supported by each user, col. 3 lines 60-63).

Zhang is silent on a plurality of packet flows are transmitted within a single transmit frame.

Staples teaches, the plurality of packet flows are transmitted within a single transmit frame (fig. 12A box 1126, 1128, 1130, MUX, 1132, pg. 16 [0197]). See corresponding demultiplexing (fig. 13A) to the multiplexing of fig. 12A.

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of Zhang to transmit, within a single frame, each of the plurality of plurality of packet flows wherein each packet flow is located in a separate portion. This modification can be performed according to the teachings of Staples, as shown.

As previously shown, the suggestion for transmitting within a single frame, each of the plurality of plurality of packet flows is to enable each user to transmit multiple applications (Zhang: col. 3 lines 60-63). The benefit obtained by this process is to minimize delay for transmission for each

application since each frame would always be able to transmit data from all the applications.

Regarding the limitation, performing ARQ and transmitting these packets within a single transmit frame independent from and without affecting the transmission of the others of the plurality of packet flows transmitted within the single transmit frame, the combination, as previously shown, Staples shows data from each flow is placed in a specified portion of the frame (Staples: fig. 12A box 1126, 1128, 1130, MUX, 1132, pg. 16 [0197]). Therefore, the transmission of the others is not affected.

Regarding claim 4, although Zhang teaches transmitting a plurality of packets to the receiver, the reference is silent on a transmit descriptor, the transmit descriptor specifying at least how many packets of which the plurality of packet flows to transmit to the receiver.

Staples teaches a transmit descriptor, the transmit descriptor specifying at least how many packets of which the plurality of packet flows to transmit to the receiver (fig. 19A box 2416, pg. 26-27, [0325]).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of Zhang by including a

transmit descriptor specifying the number of packets in the flow. This modification can be implemented in software according to the teachings of Staples. The suggestion to modify the packet format of Zhang by including a transmit descriptor is real-time data may be transmitted as soon as it becomes available (Staples: [0325]). Note, Zhang teaches real time data (col. 4 lines 1-5). This would benefit the system by transmitting real time data without delay.

11. Claims 20, 21, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang in view of Corlett (20030023710) and further in view of Rochberger (US 6,760,309).

Regarding claim 20, Zhang teaches a method of ARQ for transmitting a packet over a forward communication channel to a receiver (fig. 1, box 200, ARQ, col. 2 lines 8-11), wherein the system supports packets of different types of service (per packet QoS, col. 2 lines 8-11).

Zhang is silent on assigning a time-to-live value to the packet, the time-to-live value representing a maximum number of transmit attempts of the packet over the channel including re-transmit attempts using the ARQ.

Corlett teaches assigning a time-to-live value to the packet, the time-to-live value representing a maximum number of transmit attempts of the packet over the channel including re-transmit attempts using the ARQ (retransmitted, TTL value of 0 drops the packet, pg. 16, [0235]). Note, the examiner corresponds the applicant's ARQ with the retransmission process of the reference.

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of Zhang by having a TTL parameter within the packet of Zhang. This modification can be performed in software by adding a TTL value parameter to the packets. The suggestion to modify the packet format of Zhang by including a TTL value is to implement a packet delay bound (Zhang: col. 3 lines 65-67). This would benefit the system by dropping packets that are no longer useful to its intended destination (Corlett: TTL value of 0 drops the packet, pg. 16, [0235]).

Although the combination teaches TTL and type of service, the combination is silent on the time-to-live value corresponds to a type of service corresponding to the packet.

Rochberger teaches the time-to-live value corresponds to a type of service corresponding to the packet (TTL information added only by time sensitive applications, col. 14 lines 21-24).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of the combination by only adding a TTL value to packets corresponding to time sensitive applications. This modification can be performed in software. The suggestion to modify is TTL information is added for packets that belong to a time delay sensitive class (Rochberger: col. 14 lines 21-24). This would benefit the system by only checking if a packet should be dropped, if the packet is time sensitive. Thus system resources would not be wasted on checking packets that are not time sensitive.

Regarding claim 21, transmitting the packet over the forward communication channel to the receiver (fig. 1, box 200, ARQ, col. 2 lines 8-11).

Regarding claim 25, wherein the TTL value represents n transmit attempts available for the packet and further comprising deleting the packet from memory after n transmit attempts including re-transmit attempts using the ARQ, this limitation is addressed by the system of the combination of

Zhang, Corlett, and Rochberger with respect to claim 20 (Corlett: original TTL value, packet with a TTL value of 0 drops the packet, [0235]). The examiner corresponds the applicant's value of "n" with Corlett's original TTL value.

12. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Zhang and Corlett as applied to claim 5 above, and further in view of Rochberger.

Although the combination teaches TTL and type of service, the combination is silent on the time-to-live value corresponds to a type of service of the packet.

Rochberger teaches the time-to-live value corresponds to a type of service corresponding to the packet (TTL information added only by time sensitive applications, col. 14 lines 21-24).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of the combination by only adding a TTL value to packets corresponding to time sensitive applications. This modification can be performed in software. The suggestion to modify is TTL information is added for packets that belong to a time delay sensitive class (Rochberger: col. 14 lines 21-24). This would benefit the system by only checking if a packet should be dropped, if the packet is

time sensitive. Thus system resources would not be wasted on checking packets that are not time sensitive.

13. Claims 8, 11, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang as applied to claims 1 and 16, above, and further in view of Malmgren (US 6,778,501). Note, claims 8, 11 are dependent upon claim 1 and claim 19 is dependent upon claim 16.

Regarding claims 8 and 19, in addition to the limitations previously addressed, transmitting packets from two or more of the plurality of packet flows to the receiver (fig. 1, multiple applications can be supported for each user, col. 3 lines 60-62).

Although Zhang teaches transmitting a packet from one of the plurality of packet flows, the reference is silent on receiving an acknowledgement from the receiver, the acknowledgement indicating whether or not each of the packets were received in error; retransmitting a respective packet of a respective one of the plurality of packet flows, in the event the acknowledgment indicates that the respective packet was received in error, without affecting the subsequent transmission of packets of others of the plurality of packet flows.

Malmgren teaches receiving an acknowledgement from the receiver, the acknowledgement indicating whether or not each of the packets was received in error (ACK, NACK, col. 1 lines 38-47); retransmitting a respective packet of a respective one of the plurality of packet flows, in the event the acknowledgment indicates that the respective packet was received in error (NACK, sender retransmits the incorrectly received PDU, col. 1 lines 41-47). Regarding the limitation without affecting the subsequent transmission of packets of others of the plurality of packet flows, Zhang teaches per packet ARQ, therefore the retransmission of one packet due to ARQ does not effect the transmission of the other packets.

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of Zhang by implementing the ARQ algorithm as shown by Malmgren. This modification can be performed in software as shown by Malmgren. The suggestion to modify is the sender may retransmit the packet based on feedback provided by the receiver (Malmgren: col. 1 lines 30-31). This would benefit the system by permitting the sender to retransmit packets that were not correctly received by the receiver.

Regarding claim 11, although Zhang teaches ARQ and transmitting a plurality of packet flows, the reference is

silent on performing selective-repeat-automatic repeat request for packet belong to the respective ones of the plurality of packet flows independent from and without affecting the transmission of packets of the others of the plurality of packet flows.

Malmgren teaches performing selective-repeat-automatic repeat request for packet belong to the respective ones of the plurality of packet flows (col. 1 lines 47-50) independent from and without affecting the transmission of packets of the others of the plurality of packet flows. Regarding the limitation without affecting the subsequent transmission of packets of others of the plurality of packet flows, Zhang teaches per packet ARQ, therefore the retransmission of one packet due to ARQ does not effect the transmission of the other packets.

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of Zhang by implementing the Selective Repeat ARQ algorithm as shown by Malmgren. This modification can be performed in software according to the teachings of Malmgren. The suggestion to modify is the sender may retransmit the packet based on feedback provided by the receiver (Malmgren: col. 1 lines 30-31). This would benefit the system by permitting the sender to retransmit packets that were not correctly received by the receiver.

14. Claim 9 rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Zhang and Malmgren as applied to claim 8 above, and further in view of Staples.

Regarding claim 9, although the combination teaches transmitting the packets of others of the plurality of packet flows (Zhang: multiple applications can be supported by each user, col. 3 lines 60-63) and retransmitting (Malmgren: col. 1 lines 41-47), the combination is silent on a single transmit frame for transmitting a plurality of packet flows.

Staples teaches, within an IP environment, a single transmit frame for transmitting different packet flows (fig. 12A box 1126, 1128, 1130, MUX, 1132, pg. 16 [0197]). Note, Zhang is also in an IP environment (Zhang: col. 3 lines 53-60).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of Zhang to transmit, within a single frame, each of the plurality of plurality of packet flows wherein each packet flow is located in a separate portion. This modification can be performed according to the teachings of Staples, as shown. As previously shown, the suggestion for transmitting within a single frame, each of the plurality of plurality of packet flows wherein each packet flow

is located in a separate portion is to enable each user to transmit multiple applications (Zhang: col. 3 lines 60-63). The benefit obtained by this process is to minimize delay for transmission for each application since each frame would always be able to transmit data from all the applications.

Regarding the limitation, retransmitting within a subsequent single transmit frame without affecting the subsequent transmission of the packets of the others of the plurality of packets within the subsequent single frame, the combination, as previously shown, shows data from each flow is placed in a specified portion of the frame (Staples: fig. 12A box 1126, 1128, 1130, MUX, 1132, pg. 16 [0197]). Therefore, the transmission of the others is not affected.

15. Claims 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Zhang, Corlett, and Rochberger as applied to claim 20 above, and further in view of Malmgren.

Regarding claim 22, as previously shown, the combination teaches retransmitting the packet to the receiver, in the event a number of transmit attempts of the packet including re-transmit attempts using the ARQ does not exceed the time-to-live

value, these limitations are addressed by the system of the combination of Zhang, Corlett, and Rochberger with respect to claim 20 (Corlett: retransmitted, packet with a TTL value of 0 drops the packet, [0235]).

Regarding claim 22, the combination is silent on negative acknowledgement from the receiver via a reverse communication channel, the negative acknowledgement indicating whether or not each of the packets was received in error; retransmitting the respective packet to the receiver.

Malmgren teaches receiving a negative acknowledgement from the receiver via a reverse communication channel, the acknowledgement indicating whether or not each of the packets was received in error (NACK, col. 1 lines 38-47); retransmitting the respective packet to the receiver (NACK, sender retransmits the incorrectly received PDU, col. 1 lines 41-47).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of Zhang by implementing the ARQ algorithm as shown by Malmgren. This modification can be performed in software according to the teachings of Malmgren. The suggestion to modify is the sender may retransmit the packet based on feedback provided by the receiver (Malmgren: col. 1 lines 30-31). This would benefit the system by permitting the

sender to retransmit packets that were not correctly received by the receiver.

Regarding claim 23, with respect to the limitations, decrementing the TTL value by one and wherein the re-transmitting step comprises retransmitting the packet to the receiver, in the event the TTL value is greater than zero, these limitations are addressed by the system of the combination of Zhang, Corlett, and Rochberger with respect to claim 20 (Corlett: TTL value reduced by one, retransmitted, packet with a TTL value of 0 drops the packet, [0235]).

Regarding claim 24, with respect to the limitation, deleting the packet from memory, in the event the total number of transmit attempts of the packet exceeds the TTL value, these limitations are addressed by the system of the combination of Zhang, Corlett, and Rochberger with respect to claim 20 (Corlett: packet with a TTL value of 0 drops the packet, [0235]).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald

Abelson whose telephone number is (571) 272-3165. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ronald Abelson
Examiner
Art Unit 2666

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